# Industrial Touch Panel PC

*PLXX-WCR*

# USER MANUAL

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## PACKAGE CONTENTS

Please make sure that the items shown below are included in the package. Should an item be missing, please contact the local retailer from which you purchased this product.

1 x Industrial Touch Panel PC
1 x Riser card (2 x PCI slot)
1 x DC in Power adapter
1 x Power cord
4 x Screws (M3 x 4) for 2.5” HDD or SSD

## SAFETY INSTRUCTIONS

1. Read Instructions: All the safety and operating instructions should be read before the equipment is operated.

2. Retain Instructions: The safety and operating instructions should be retained for future reference.

3. Cleaning: Unplug this equipment from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. Water and Moisture: Do not use this equipment near water.

5. Ventilation: The openings on the enclosure are provided for ventilation to ensure reliable operation of the equipment and to protect it from overheating. These openings should never be blocked.

6. Power Sources: This equipment should be operated only from the type of power source indicated on the rating label. If you are not sure of the type of power supply, consult your dealer or local power company.

7. Heed Warnings: All warnings on the equipment and in the operating instructions should be adhered to.

8. Object and Liquid Entry: Never push objects of any kind into this equipment through openings as they may touch dangerous voltage points or shout-out parts that could result in a fire or electric shock. Never Spill liquid of any kind on the equipment.

9. Servicing: Do not attempt to service this Equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

10. Damage Requiring Service: Unplug this equipment from the outlet and refer

servicing to qualified service personnel under the following conditions: a) if the power cord or plug is damaged; b) if liquid has penetrated into the equipment; c) if the equipment has been exposed to moisture; d) if the equipment does not work well, or you cannot get it to work according to the user's manual; e) if the equipment has been dropped and dam aged; f) if the equipment has obvious signs of breakage.

11. Do not leave this equipment in an environment where the storage temperature is below -10° C or above 70° C. It may damage the equipment.

12. Do not open the sealed enclosure / case of equipment. Once enclosure is disassembled without approval, it will lead in abnormal operating of waterproof gel. For Guarantee of water proof function, please make sure configuration / peripheral has been confirmed to install before shipping.

## FCC

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and
(2) this device must accept any interference received including interference that may cause undesired operation.

## CE

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

## INTRODUCTION

PLXX-WCR Series, equipped with Intel Celeron / i5 processor, is an industrial touch panel PC featuring high performance but low power consumption under the fanless architecture. Moreover, its advanced computing and graphic performance allows manufacturers for complex applications, such as visualization and motion control.

In addition, the waterproof gasket design and an external DVD-RW driver are offered optionally for advanced protection from water intrusion and easy data storage / backup respectively.

You can also choose to integrate a RFID sensor into the device for RFID technology application, such as logistics, warehousing, distribution or industrial automation (identification of work piece carriers on assembly lines, material flow control, identification of containers and other receptacles).

## FEATURES

- Intel Celeron/i5 CPU + Intel HM 75 chipset
- Powerful performance but low power consumption under fanless design
- Compact design
- 2 x GLAN
- Up to 2 x COM
- 4 x USB
- 1 x Audio (1 x Line-out, 1 x MIC-in)
- 1920 x 1080 (21” wide screen)
- DC in 12V / 19V
- IP65 compliant 6mm thickness aluminum front bezel
- High quality aluminum

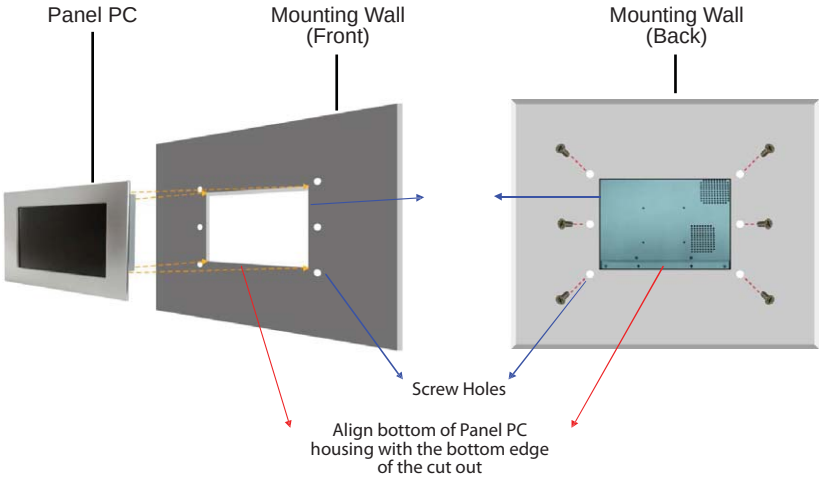
## MOTHERBOARD SPECIFICATION

| | | | |
|---|---|---|---|
| **CPU** | Intel Core Celeron / i5 (up to 2.7GHz) | | |
| **Chipset** | Intel HM76 | | |
| **BIOS** | AMI 64 Mbit SPI BIOS | | |
| **Memory** | 2 x 204-pin SODIMM socket supports DDR3 1066MHz up to 8GB | | |
| **Display** | Controller: Intel HD Graphics | | |
| | Interface: 1 x Dual channel 24-bit LVDS, 1 x DVI (DVI-I), 1 x HDMI | | |
| **Ethernet** | 1 x Intel 82579LM GbE LAN PHY, 1 x Intel 82574L GbE LAN | | |
| | 10/100/1000 Mbps | | |
| **Audio** | Realtek ALC886 HD Audio CODEC | | |
| **Storage** | 2 x SATA 2.0, 1 x mSATA (optional) | | |
| **Expansion** | 2 x Mini PCIe | | |
| **Rear Panel I/O Port** | 1x HDMI | 1x DVI-I | 4x USB2.0 |
| | 2x RJ-45 LAN | 1x Mic-in | 1x Line-out |
| | DC 12V/19V input | | |
| **Internal I/O** | 2 x USB 3.0 | 1x SPI Flash ROM pin header | |
| | 4 x RS-232 | 1x chassis intrusion connector | |
| | 1 x LVDS | 1x amplifier pin header | |
| **Power** | Output System reset, Programmable 1 ~ 255 sec/min | | |
| **Watchdog Timer** | Operating temperature: 0°C ~ 60°C | | |
| **Environment** | Storage temperature: -20°C ~ 80°C | | |

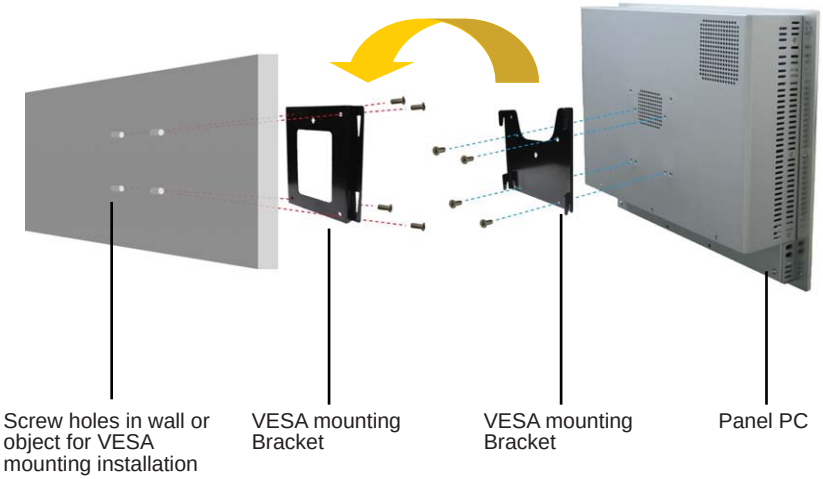
## SYSTEM SPECIFICATION

| SIZE | 21.5” |
|---|---|
| **CPU** | Intel Core i5 (up to 2.7GHz) / Celeron 827E |
| **Chipset** | Intel HM76 Express |
| **Memory** | 1 x DDR III SODIMM, up to 8 GB |
| **Power Supply** | DC 12V / 19V external power adapter |
| **Rear I/O Ports** | 1 HDMI, 1 DVI, 2 Gb LAN, 4 USB, 1 Mic-in, 1 Line-Out<br>1 3-pin terminal block power connector |
| **Expansion** | 2 x Mini PCIe slot (1 with mSATA function), 1 x SIM socket |
| **Size/Type** | 21.5” TFT (16:9) |
| **Resolution** | Full HD 1920 x 1080 |
| **Colors** | 16.7M |
| **Luminance (cd/m2)** | 300 |
| **Contrast Ratio** | 1000:1 |
| **Viewing Angle (H/V°)** | 170/160 |
| **MTBF** | 50,000hrs |
| **Touch Screen** | 5-Wire Resistive |
| **Installation** | VESA mount 100 x 100mm |
| **Weight** | 13.5Kg |
| **Operation Temp.** | 0°C~ 45°C |
| **Storage Temp.** | -10°C ~ 70°C |
| **Relative Humidity** | 0% - 95% non-condensing |
| **OS** | Win 7 Pro, Win 8 Pro, Embedded XP, Embedded 7, Embedded 8 |

## MOUNTING INSTALLATION



## VESA MOUNTING INSTALLATION




**Step 1:** Screw the VESA mounting plate to the Panel PC

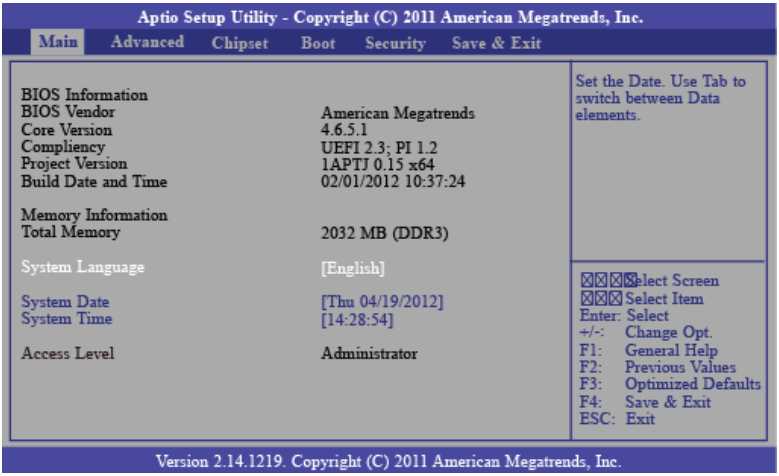
**Step 2:** Screw the VESA mounting bracket to the front of a wall or the front / back of an object dependingly

**Step 3:** Slide the VESA mounting plate onto the VESA mounting bracket

# BIOS SETUP

## Main

The Main menu is the first screen that you will see when you enter the BIOS Setup Utility.




***System Date***

The date format is <day>, <month>, <date>, <year>. Day displays a day, from Sunday to Saturday. Month displays the month, from January to December. Date displays the date, from 1 to 31. Year displays the year, from 1980 to 2099.

***System Time***

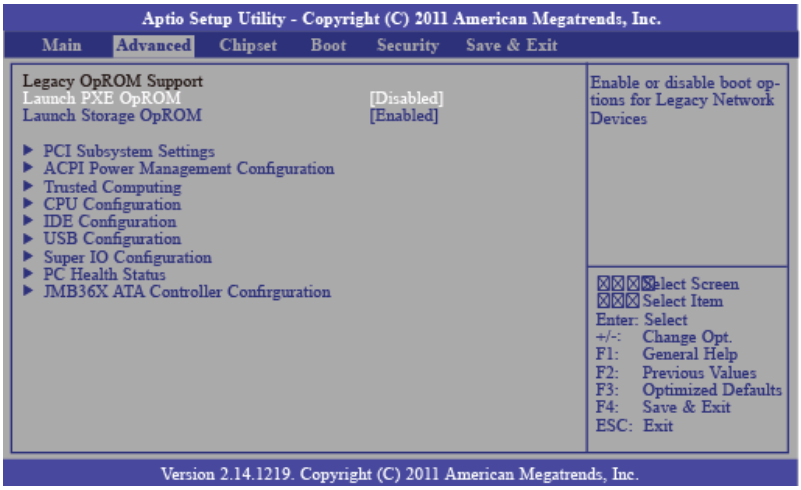
The time format is <hour>, <minute>, <second>. The time is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Hour displays hours from 00 to 23. Minute displays minutes from 00 to 59. Second displays seconds from 00 to 59.

## Advanced

The Advanced menu allows you to configure your system for basic operation. Some entries are defaults required

by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference.

Important: Setting incorrect field values may cause the system to malfunction.




***Launch PXE OpROM***

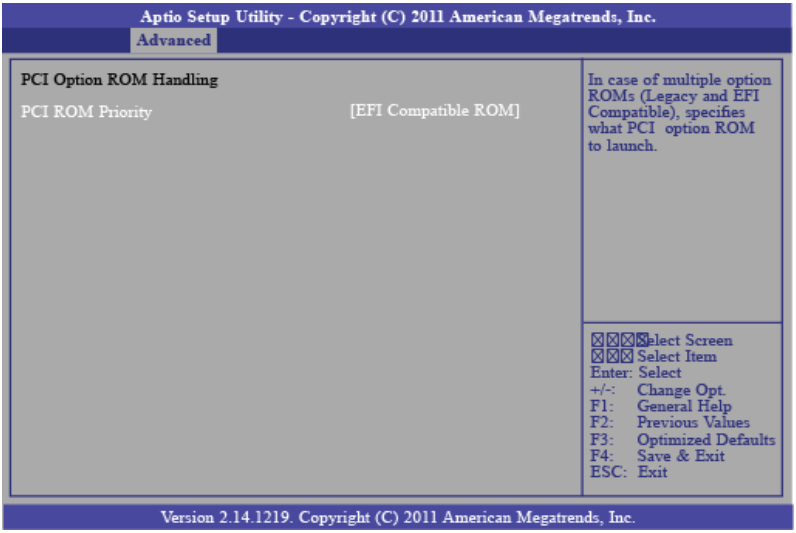
Enables or disables the boot option for legacy network devices.

***Launch Storage OpROM***

Enables or disables the boot option for legacy mass storage devices with option ROM.

## PCI Subsystem Settings

This section is used to configure the PCI subsystem settings


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Advanced
PCI Option ROM Handling
PCI ROM Priority
[EFI Compatible ROM]
In case of multiple option ROMs (Legacy and EFI Compatible), specifies what PCI option ROM to launch.
Select Screen
Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.

### ACPI Power Management Configuration

This section is used to configure the ACPI Power Management.

***ACPI Sleep State***

Selects the highest ACPI sleep state the system will enter when the Suspend button is pressed.

S1(POS) Enables the Power On Suspend function.

S3(STR) Enables the Suspend to RAM function.

***Resume by PME***

Enable this field to use the PME signal to wake up the system.

***Wake system with fixed time***

Enable or disable system wake on alarm event. When enabled, system will wake on the hr::min::sec specified.

### Trusted Computing (optional)

This section configures settings relevant to Trusted Computing innovations.

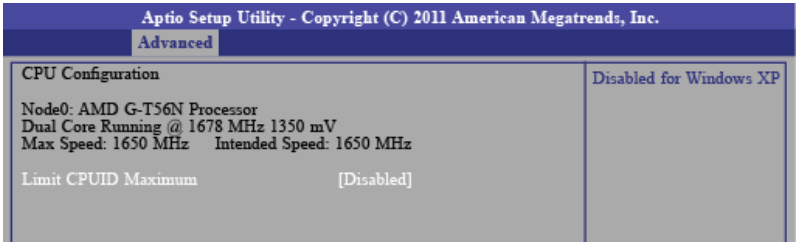
Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Advanced
Configuration
TPM Support
[Disabled]
Current Status Information
No Security Device Found
Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

***TPM Support***

Enables or Disables TPM. O.S. will not show TPM. Resetting the platform is required.

### CPU Configuration

This section is used to configure the CPU. It will also display the detected CPU information.

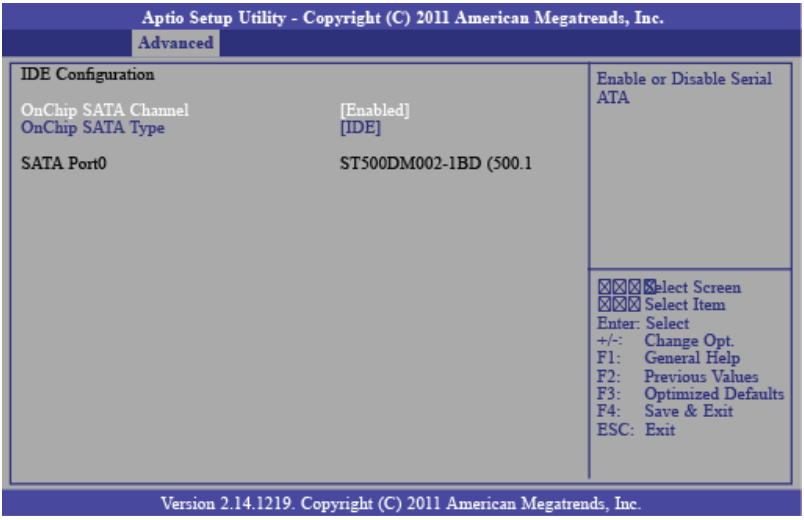

Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Advanced
CPU Configuration
Node0: AMD G-T56N Processor
Dual Core Running @ 1678 MHz 1350 mV
Max Speed: 1650 MHz Intended Speed: 1650 MHz
Limit CPUID Maximum
[Disabled]
Disabled for Windows XP

***Limit CPUID Maximum***

The CPUID instruction of some newer CPUs will return a value greater than 3. The default is Disabled because this problem does not exist in the Windows series operating systems. If you are using an operating system other than Windows, this problem may occur. To avoid this problem, enable this field to limit the return value to 3 or less than 3.

## IDE Configuration

This section is used to configure IDE functions.




***OnChip SATA Type***

This field is used to configure the SATA devices supported by the AMD T56N/T40N.

**Native IDE** This option configures the Serial ATA drives as Parallel ATA storage devices.

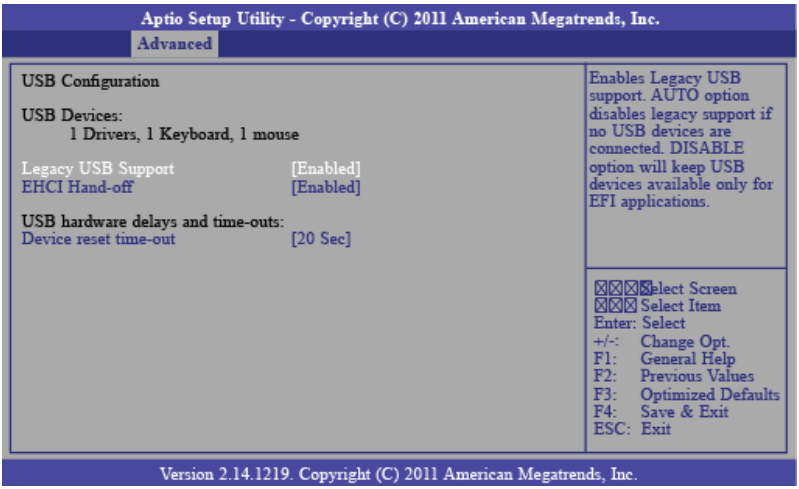
**RAID** This option allows you to create RAID on Serial ATA devices.

**AHCI** This option allows the Serial ATA devices to use AHCI (Advanced Host Controller Interface).

**Legacy IDE** This option configures the Serial ATA drives as Legacy IDE storage devices.

## USB Configuration

This section is used to configure USB.


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Advanced
USB Configuration
USB Devices:
1 Drivers, 1 Keyboard, 1 mouse
Legacy USB Support [Enabled]
EHCI Hand-off [Enabled]
USB hardware delays and time-outs:
Device reset time-out [20 Sec]
Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.
Select Screen
Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.

***Legacy USB Support***

**Enabled** Enables legacy USB.

**Auto** Disables support for legacy when no USB devices are connected.

**Disabled** Keeps USB devices available only for EFI applications.

***EHCI Hand -off***

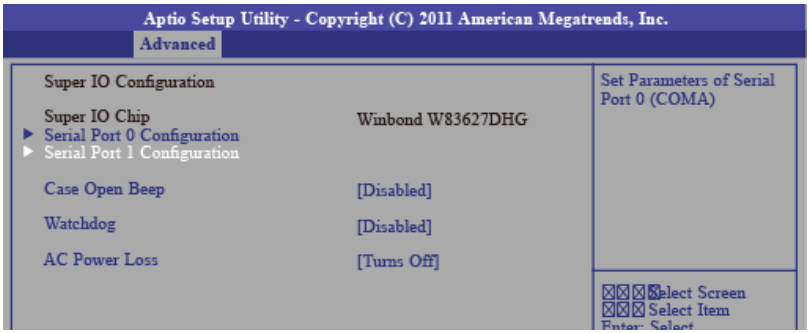
This is a workaround for OS's that do not support EHCI hand-off. The EHCI ownership change should be claimed by the EHCI driver.

***Device reset time-out***

Selects the USB mass storage device start unit command timeout.

## Super IO Configuration

This section is used to configure the serial port functions.




***Case Open Beep***

Set this field to Enabled to allow the system to alert you of a chassis intrusion event.

***Watchdog***

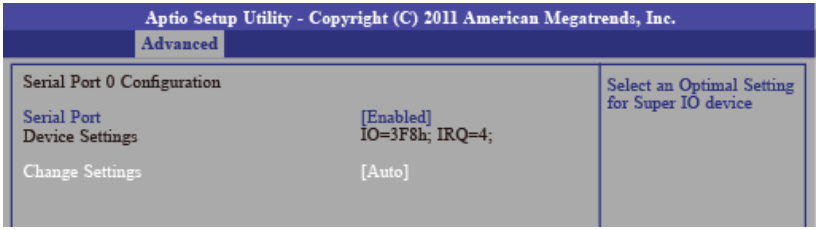
This field is used to enable or disable the Watchdog Timer function.

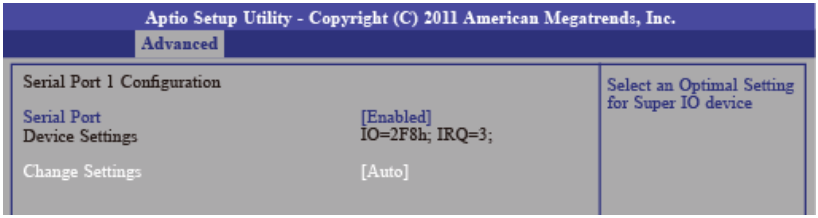
***AC Power Loss***

| | |
|---|---|
| **Turns Off** | When power returns after an AC power failure, the system's power is off. You must press the Power button to power-on the system. |
| **Turns On** | When power returns after an AC power failure, the system will automatically power-on. |
| **Former-Sts** | When power returns after an AC power failure, the system will return to the state where you left off before power failure occurs. If the system's power is off when AC power failure occurs, it will remain off when power returns. If the system's power is on when AC power failure occurs, the system will power-on when power returns. |

## Serial Port 0 Configuration to Serial Port 1

Configuration




***Serial Port***

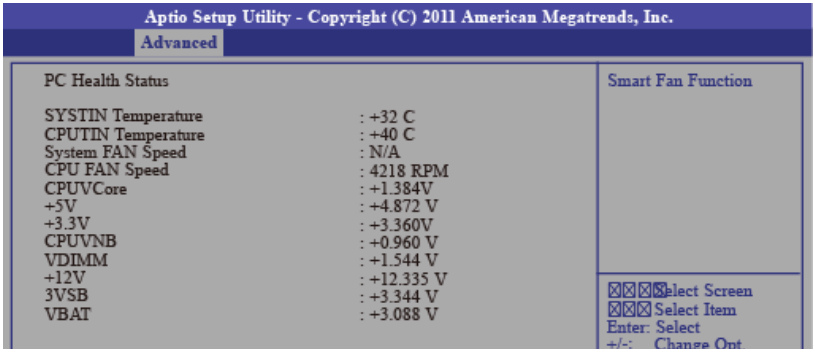
Enables or disables the serial port.

***Change Settings***

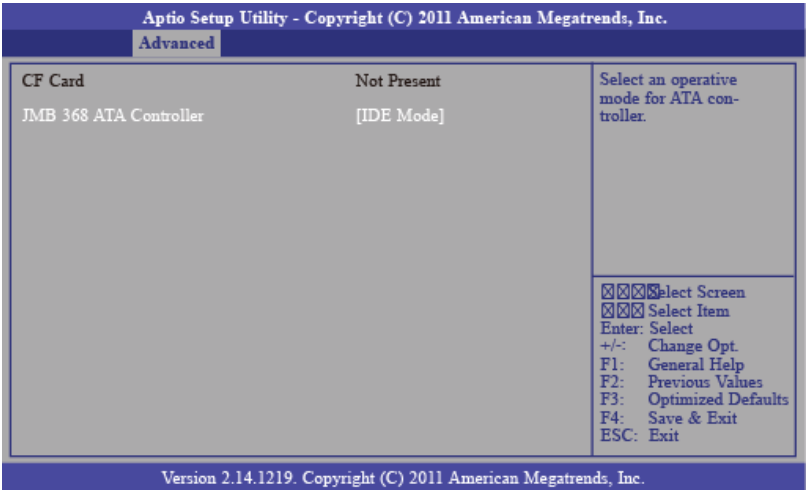
Selects the IO/IRQ setting of the I/O device

## PC Health Status

This section displays the SIO hardware health monitor.

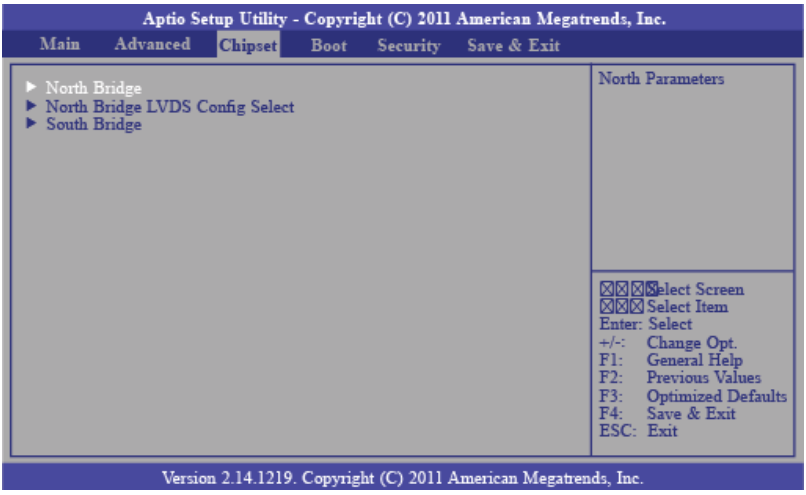

Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Advanced
PC Health Status
SYSTIN Temperature : +32 C
CPUTIN Temperature : +40 C
System FAN Speed : N/A
CPU FAN Speed : 4218 RPM
CPUVCore : +1.384V
+5V : +4.872 V
+3.3V : +3.360V
CPUVNB : +0.960 V
VDIMM : +1.544 V
+12V : +12.335 V
3VSB : +3.344 V
VBAT : +3.088 V
Smart Fan Function
Enter: Select

### JMB36X ATA Controller Configuration

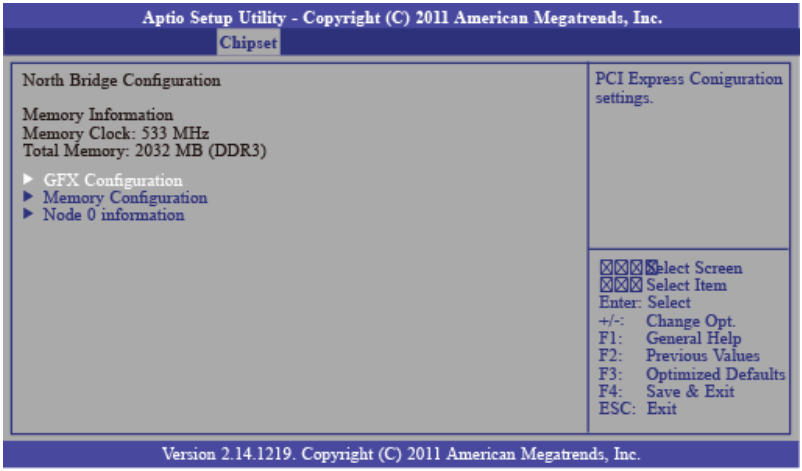



### Chipset

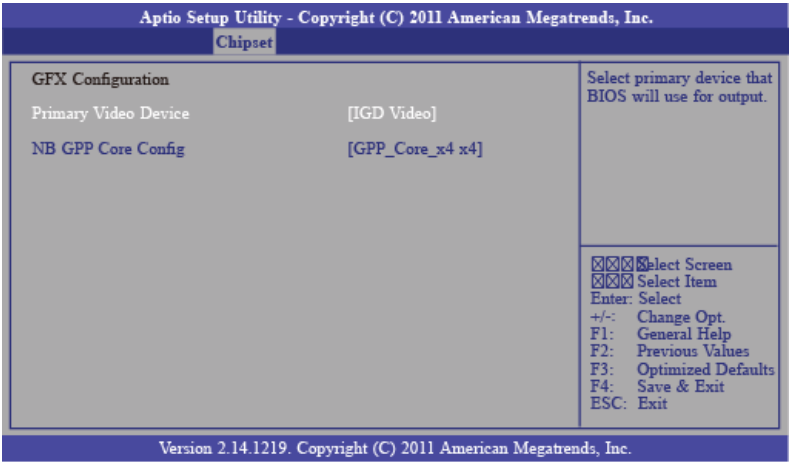
Configures relevant chipset functions.



### North Bridge Configuration



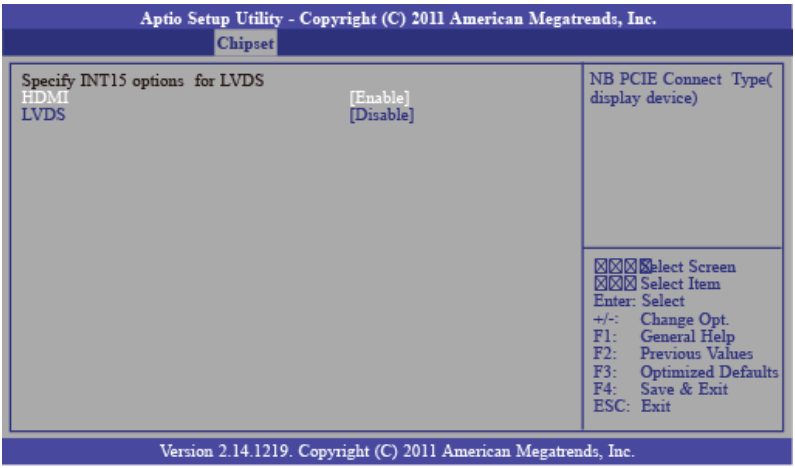

### GFX Configuration


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Chipset
GFX Configuration
Primary Video Device [IGD Video]
NB GPP Core Config [GPP_Core_x4 x4]
Select primary device that BIOS will use for output.
Select Screen
Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.

***NB GPP Core Config***

Selects the NB GPP Core configuration.

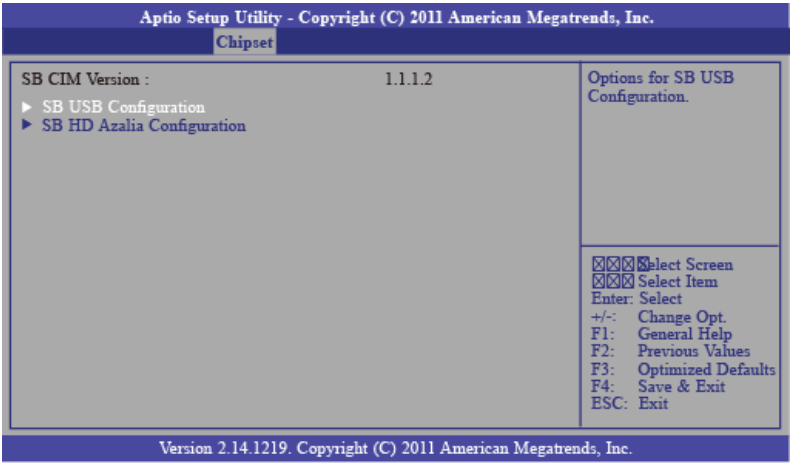
### North Bridge LVDS Config Select



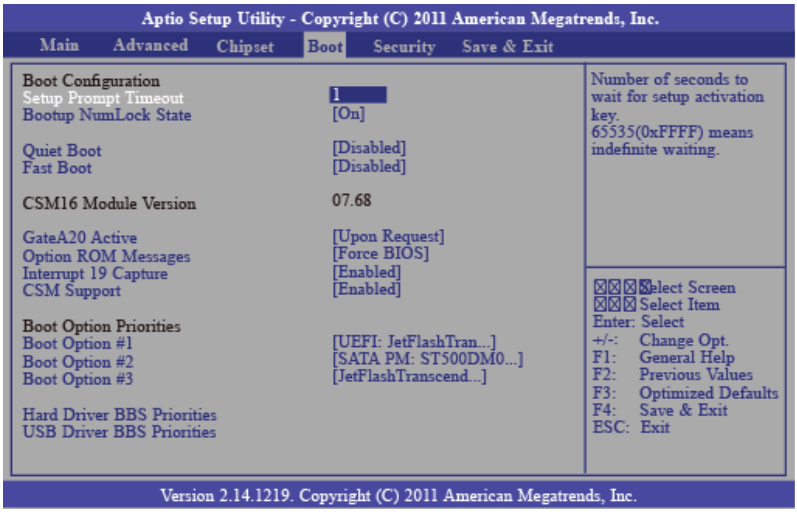

***LVDS***

This field is used to enable or disable the LVDS Panel

### South Bridge



## Boot




***Setup Prompt Timeout***

Selects the number of seconds to wait for the setup activation key. 65535(0xFFFF) denotes indefinite waiting.

***Bootup NumLock State***

This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on wherein the function of the numeric keypad is the number keys. When set to Off, the function of the numeric keypad is the arrow keys.

***Quiet Boot***

Enables or disables the quiet boot function.

***Fast Boot***

Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.

***GateA20 Active***

Upon Request- GA20 can be disabled using BIOS
services. Do not allow disabling GA20; this option is useful when any RT code is executed above 1MB.

***Option ROM Messages***

Set display mode for option ROM.

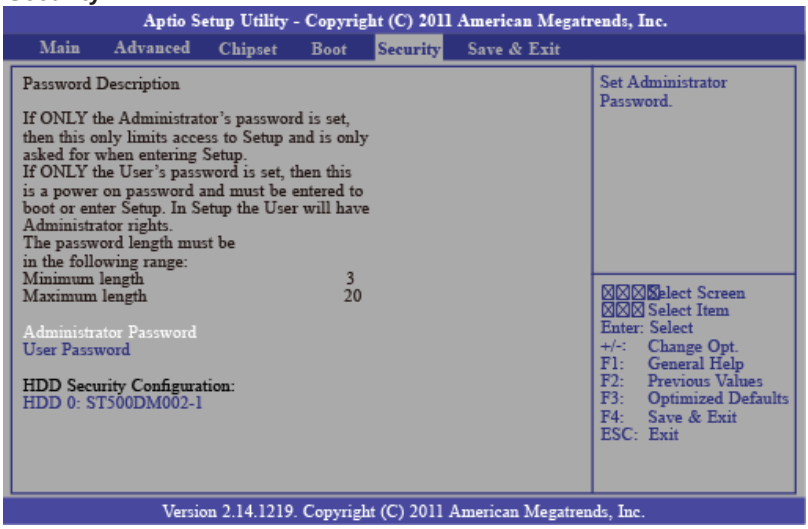
***Interrupt 19 Capture***

Enabled: Allows option ROMs to trap Int 19.
Disabled:

***CSM Support***

Enabled/ disabled CSM support. If auto is selected, based on OS, CSM will be enabled/ disabled automatically.

## Security


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main
Advanced
Chipset
Boot
Security
Save & Exit
Password Description
If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup.
If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights.
The password length must be in the following range:
Minimum length 3
Maximum length 20
Administrator Password
User Password
HDD Security Configuration:
HDD 0: ST500DM002-1
Set Administrator Password.
Select Screen
Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.

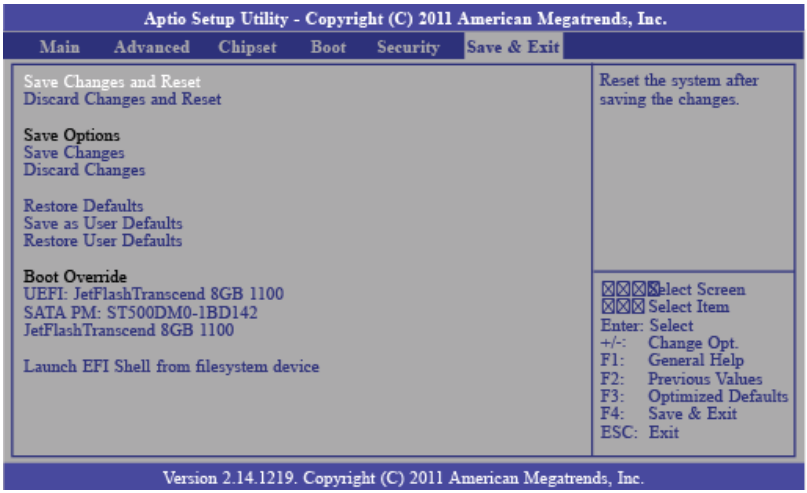
***Administrator Password***

Sets the administrator password.

***User Password***

Sets the user password.

## Save & Exit




***Save Changes and Reset***

To save the changes, select this field and then press <Enter>. A dialog box will appear. Select Yes to reset the system after saving all changes made.

***Discard Changes and Reset***

To discard the changes, select this field and then press <Enter>. A dialog box will appear. Select Yes to reset the system setup without saving any changes.

***Save Changes***

Save the changes done so far to any of the setup options.

***Discard Changes***

Discard the changes done so far to any of the setup options.

***Restore Defaults***

To restore and load the optimized default values, select this field and then press <Enter>. A dialog box will appear. Select Yes to restore the default values of all the setup options .

***Save as User Defaults***

To save changes done so far as user default, select this field and then press <Enter>. A dialog box will appear. Select Yes to save values as user default.

***Restore User Defaults***

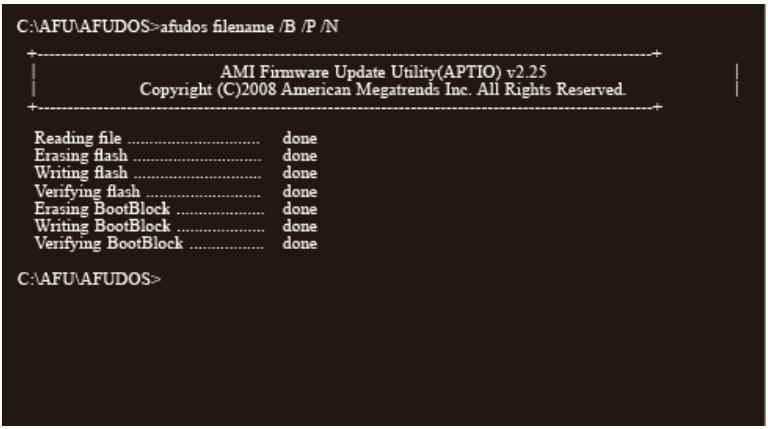
To restore user default to all the setup options, select this field and then press <Enter>. A dialog box will appear. Select Yes to restore user default.

**Updating the BIOS**

To update the BIOS, you will need the new BIOS file and a flash utility, AFUDOS.EXE. Please contact technical support or your sales representative for the files.

To execute the utility, type:

A:> AFUDOS BIOS_File_Name /b /p /n then press <Enter>.


C:\AFU\AFUDOS>afudos filename /B /P /N
AMI Firmware Update Utility(APTIO) v2.25
Copyright (C)2008 American Megatrends Inc. All Rights Reserved.
Reading file ..... done
Erasing flash ..... done
Writing flash ..... done
Verifying flash ..... done
Erasing BootBlock ..... done
Writing BootBlock ..... done
Verifying BootBlock ..... done
C:\AFU\AFUDOS>

The PLXX-WCR Series comes with an AutoRun CD-ROM that contains all drivers and utilities that can help you to install the driver automatically.

Insert the driver CD, the driver CD-title will auto start and show the installation guide. If not, please follow the sequence below to install the drivers.

***Step 1 – Install Chipset Driver***

1. Click on the STEP1-CHIPSET folder and select the OS folder
2. Double click on the .exe file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

***Step 2 – Install VGA Driver***

1. Click on the STEP2-VGA folder and select the OS folder
2. Double click on the Setup.exe file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

***Step 3 –Install LAN Driver***

1. Click on the STEP3-LAN folder and select the OS folder
2. Double click on the .exe file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

***Step 4 –Install Touch Driver (Optional)***

1. Click on the STEP4-TOUCH (Option) folder and select the OS folder
2. Double click on the .exe located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

***Step 5 –Install Rapid Storage Driver (Optional)***

1. Click on the STEP5-RAPID STORAGE (Option) folder and double click on the setup.exe
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

## CONTACT INFORMATION

If you have any questions, please contact us.

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